Supreme Court, U.S.
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No. _____

In the Supreme Court of the United States

JAMES NELSON, et al.,
Petitioners,

v.

TENNESSEE GAS PIPELINE COMPANY;
EL PASO TENNESSEE PIPELINE COMPANY,
Respondents.

ON PETITION FOR WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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QUESTION PRESENTED

Whether the Sixth Circuit Court of Appeals erred in affirming the decision of the District Court in excluding the expert testimony of Petitioners' experts, Kaye Kilburn, M.D., and Alan Hirsch, M.D., without leave to supplement their testing, based upon the Court's *Daubert* case evaluation?

PARTIES TO THE PROCEEDINGS

Pursuant to Rule 14.1(b), of the Supreme Court Rules, the following are parties to the proceeding:

JAMES NELSON and MICAELA NELSON, As Married Individuals and As Parents for ERIC NELSON and MICAELA JANAE NELSON, JAMES NELSON and MESHELLE LEIGH NELSON, As Individuals and As Parents For the ESTATE OF SHEENA MESHELLE NELSON (Deceased), and for APRIL NELSON and MICHAEL NELSON, Minors; BRANDON NELSON, An Individual; JAMES DARRELL ADKINS, An Individual; JERRY BARBER, Acting on Behalf of the ESTATE OF JAMES LESTER BARBER (Deceased); JERRY BARBER and MARGIE DENE BARBER, As Married individuals; LOU ANN BATES, An Individual; SAM BATTAGLIA, An Individual; RICKY BELL, An Individual; RONNIE W. BELL, An Individual; THOMAS BELL and MARY RUTH BELL, As Married Individuals; JUNE ELLEN BLEDSOE, As An Individual and Parent of THERESA DAWN COX, a Minor; FONDA LARRAINE BRASHIER, An Individual; DENNIS KEITH BREECE and LAURA ANN BREECE, As Married Individuals; ALTHA CLARK and EDWARD EUGENE CLARK, As Married Individuals; LUCILLE GRAY COTHAM and RICKY DALE COTHAM, As Married Individuals; LUCILLE GRAY COTHAM, As Parent for CHRISTOPHER MICHAEL STARKY, KANDRA ANN STARKY, and KRISTIAN STARKY, Minors; D'MITRY DUAIN COX, An Individual; JOHNNY CLARENCE EMORY and TAMMY EMORY, As Married Individuals and as Parents for DANIELLE DESIREE EMORY and JUSTIN TYLER EMORY, Minors; JAMES R. FRENCH, An Individual; MICHAEL FROST, An Individual; JOE GRAY, An Individual; LUCY GRAY, An Individual; WALTER

EUGENE GRAY, An Individual; RICHARD DALE HESTER, An Individual; BEVERLY ANN HICKERSON and JAMES JASON HICKERSON, As Married Individuals and As Parents for STACY ARLENE HICKERSON, STEPHANIE ANN HICKERSON, and STEPHEN ANDREW HICKERSON, Minors; JUDY D. HIMES, An Individual; TRAVIS HIMES, An Individual; ROBERT MARABLE HINSON, An Individual; SANDRA KAY HOAG, An Individual; RHONDA LOUIS LEDBETTER, An Individual, PATRICIA AVON LEWIS, An Individual; BETTY JEAN NELSON and FRED NELSON, As Married Individuals and as Parents for EVETTE RENEE NELSON, JORDAN D. NEILSON, and JOSHUA A. NELSON, Minors; GRETHER NELSON and LONNIE NELSON, As Married Individuals and As Parents for TERESA NELSON, a Minor; JIMMY RAY NELSON, An Individual; JODY LEE NELSON, An Individual; RICKY LEE NELSON and SALLY NELSON, As Married Individuals and As Parents for LONNIE HOWARD NELSON and RICKY LEE NELSON, JR., As Minors; STEVE PARKER and MARGARET PARKER, As Married Individuals; MARY JO PHEBUS, An Individual and as Parent for MITCHELL LEE SKELTON. A Minor; MELANIE JO SPICER, An Individual; MICHELE RENEE STURGILL, An Individual; MELISSA VARNER, An Individual; SANDRA HOAG for and on Behalf of the ESTATE OF BROWN SMITH WARD (Deceased); LINDA EILEEN WARD, An Individual; BARBARA WARREN and ROGER WARREN, As Married Individuals and As Parent for KENDRA NICHOLE WARREN, A Minor; DONALD EUGENE WARREN and CONNIE MARIE WARREN, As Married Individuals and As Parents For DOMINIC COLTON WARREN, MIRANDA DONETTE WARREN, and STEVE GUNNER WARREN, Minors; ROGER BRANDON WARREN, An Individual; BETTY JOAN WATKINS and BOB WATKINS, As Married Individuals; ERIC WOOD, An

Individual; RODNEY SCOTT WOOD, An Individual; TERRY LEE WOOD, As An Individual on behalf of the ESTATE OF JIM WOOD (Deceased); TERRY LEE WOOD, An Individual; TIFFANY RAY ADKINS, An Individual; ROBERT ALLIO and CHARLENE ALLIO, As Married Individuals; WILMA AMOS, An Individual; JOANN BARBER ANDREWS, An Individual; MICHAEL AARON ARTHUR, An Individual; VET BANDY, An Individual; CARL BARBER, An Individual; DALE BARBER, An Individual; DAVID A. BARBER, An Individual; DELORES BARBER, An Individual; DELORES DELMA BARBER, An Individual; FRANK BARBER, JR., An Individual; JAMES R. BARBER. An Individual; JOHN S. BARBER and LEONA M. BARBER, As Married Individuals; ELAINE BARTLEY, An Individual; JEFF BARTLEY, As Individual; JEREMY BARTLEY, An Individual; JOHN BARTLEY, As Individual; ERIE BARTLEY, An Individual; RICKY BATTLES, An Individual; CANDY MELISSA BATTLES, An Individual; MICHELLE LEE (ADKINS) BELL, an Individual; AL BEST, An Individual; ROY CAMPBELL, An Individual; JESSIE CHANDLER, An Individual; ASHLEY MARIE CHIPMAN, An Individual; DEBORAH GAYE CHIPMAN, An Individual; CONNIE RENEE CLARK, An Individual; LOUISE CLARK, An Individual; ALICE FAYE COOK, An Individual; MYRTLE IMOGENE COOK, An Individual; BILLY CROWELL and CHERYL CROWELL, As Married Individuals; SHEILA CROWELL, An Individual; REBECCA CROWELL, An Individual, MARILYN DAVIS, an Individual; FAYE DOBBS, An Individual; REED DOBBS, An Individual; BRIAN DUART, An Individual; LINDA DePRIEST, An Individual; WILLIAM FRENCH, An Individual; ROBBIE JEAN GILBERT, An Individual; BEVERLY GOAD, An Individual; DEBORAH K. HARDIN, An Individual; MATTHEW HARDIN, An Individual; JESSEE CLARK HASTON, An Individual; JANICE

HENSON, An Individual; DEBORAH GAIL HESTER, An Individual; ERIC HICKERSON, An Individual; JANE HICKERSON, An Individual; BARBARA HALEY HIMES, An Individual; MICHELLE LEIGH. An Individual; WILLIAM THOMAS McCOMAS, An Individual; CYNTHIA NIX, An Individual; THERESA PARNELL, An Individual; MARILYN CLARK PRITCHETT, An Individual: CHRISTINE RAMEY, An Individual; BOBBIE JOE SMITH, An Individual; DELVAINE SMITH. An Individual; JAMES THOMAS STAYROOK and LISA STAYROOK, As Married Individuals and as Parents of MELISSA STAYROOK, A Minor; RANDALL LYNN TROLL, An Individual; TIFFANY TROLL, An Individual; CAROL ULMER, An Individual; DONALD DALE WARREN, An Individual; DONNA JEAN WARREN, An Individual; GUSTRA WARREN and RICHARD N. WARREN, As Married Individuals; MELISSA WARREN, An Individual; ALINE WESTBROOK and EARL WESTBROOK, As Married Individuals; KERRY WESTBROOK, An Individual; and JOHN OR JANE DOES, YET UNKNOWN WHO MAY ELECT TO BE A PLAINTIFF IN THE CASE DESCRIBED HEREIN,

Petitioners.

All Petitioners have no corporation affiliations.

TENNESSEE GAS PIPELINE COMPANY; EL PASO TENNESSEE PIPELINE COMPANY,

Respondents.

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James Nelson, et al., Petitioners in this case, respectfully request that this Court issue a writ of certiorari to review the judgment entered in this case by the United States Court of Appeals for the Sixth Circuit.

OPINIONS BELOW

The opinion of the United States Sixth Circuit Court of Appeals has an electronic citation of 2001 FED App. 0066P (6th Cir.) File name: 01a0066p.06, and is reproduced in App. A at 1a-20a. The Order of the United States District Court for the Western District of Tennessee is unreported and is reproduced in App. B at 21a-26a.

STATEMENT OF JURISDICTION

The Opinion of the United States Court of Appeals for the Sixth Circuit was issued on March 9, 2001. This Court has jurisdiction under 28 U.S.C. section 1254(1).

STATEMENT OF THE CASE

A. Course of Proceedings & Disposition of the Case Below

Petitioners filed a class action law suit in the United States District Court for the Western District of Tennessee, Eastern Division, claiming damages for numerous years of exposure to toxic chemicals, polychlorinated biphenyls (PCB's) and related chemicals, toxic chemicals which the Respondents allowed to be released into the soil, groundwater, drainage areas, surface water, and atmosphere in an area adjacent to Respondent's compressor station where petitioners all resided.

The U.S. District Court, on Respondents' motions, entered a decision excluding the testimony of Petitioners' expert witnesses, based upon this Court's holdings in *Daubert* and its progeny. The District Court also denied Petitioners' Motion to Alter or Amend Court Order.

Petitioners appealed to the U.S. Sixth Circuit Court of Appeals. On appeal the decision of the District Court was affirmed.

B. Statement of Facts

The Sixth Circuit Decision affirmed stating that Petitioners' Experts studies and opinions regarding petitioners lacked the requisite scientific validity in the methodology used. Namely, that the experts failed to demonstrate evidence of dose-responses, failed to account for confounding factors, and that the studies do not enjoy general acceptance in the scientific community. Petitioners' experts are Kaye Kilburn, M.D., and Alan Hirsch, M.D. Dr. Kilburn is a renowned toxicologist with an extensive record of publications. He is a professor at the University of Southern California, School of Medicine, is a member of several editorial boards for medical journals and has authored or co-authored more than two hundred publications in medical journals and thirty publications on chemical brain injuries in scientific or medical journals. He also authored the book Chemical Brain Injury in 1998. Over forty years, he has tested and studied thousands of individuals in regards to toxic exposures. He has spent his life in this field, in the trenches of toxicology. (RE 223, Declaration of Kaye H. Kilburn, M.D., w/ Curriculum Vitae, JA pp. 2679-2711).

The peer reviewed and scientific studies support the testing procedures and statistical analysis used by Dr. Kaye

Kilburn and Dr. Alan Hirsch to establish the causal relationship between the symptoms of the flagship plaintiffs in this case and their exposure to "PCBs".

The Court placed heavy emphasis on the lack of "dose-response" testing and a lack of testing for "confounding factors". However, the scientific study in the field of PCBs and related chemicals show that these elements of testing are not accurate or necessary to have a valid "scientific study". Nevertheless, Dr. Kilburn did test for confounding factors.

In a study entitled "Polychlorinated Biphenyls: A Brief Review:" authored by Alf Fischbein, M.D., and Joan N. Rizzo, M.P.H., both from the Division of Environmental and Occupational Medicine, Department of Community Medicine, Mount Sinai School of Medicine (CUNY), One Gustave L. Levy Place, New York, New York 10029 published in the The Mount Sinai Journal of Medicine, Vol. 54, No. 4, May 1987, the authors stated as follows:

> Dose-response relationships have not been well elucidated in human studies, even though some biochemical parameters, such as serum triglyceride levels, have shown statistically significant correlations with serum levels of PCBs. Similar observations have been reported with regard to liver function tests, but in most cases the biochemical variables have been within normal range (27-33). Confounding factors have often not been considered.

(RE 253, Exhibit Q, JA p. 3885).

In the following workshop of many scientists it was determined that, "A battery of tests should not be expected to provide dose-response information." The scientific testing that should be done should include:

a. Motor development and function
b. Cognitive function
c. Motivational/arousal behavior
d. Sensory function
e. Social behavior

These tests were used by petitioners' experts in the instant case. The workshop was reported in the article entitled "Workshop on the Qualitative and Quantitative Comparability of Human and Animal Developmental Neurotoxicity: Summary and Implications" authored by Elaine Z. Francis, Carole A. Kimmel, and D. Cooper Rees, all associated with the Reproductive and Developmental Toxicology Branch, Office of Health and Environmental Assessment Office of Research and Development and Health and Environmental Review Division, Office of Toxic Substances United States Environmental Protection Agency, Washington D.C. The article states:

> The U.S. Environmental Protection Agency has taken the lead among the U.S. Federal Agencies in developing a protocol to assess the potential developmental neurotoxicity of agents.
>
> . . .
>
> In the process of developing this protocol, deliberations took place both among scientists within the Agency and with scientists from academia and the chemical industry.
>
> . . .

QUALITATIVE AND QUANTITATIVE COMPARABILITY OF HUMAN AND ANIMAL DEVELOPMENTAL NEUROTOXICANTS

Experts were invited to review and present . . . the human and experimental animal data on agents known to cause developmental neurotoxicity in humans. These agents included . . . polychlorinated biphenyls (PCBs), . . .

The qualitative comparability of human and experimental animal data was assessed and the following behavioral categories of function were selected for evaluation: motor development and function, cognitive function, motivational/arousal behavior, sensory function, and social behavior. A number of limitations associated with assessing cross-species comparability were identified. These included: . . . dose-response information was limited and, therefore, it was not possible to assess comparability of results at equivalent administered dose levels or dose ranges, . . . Despite the recognized limitations in making these comparisons, the degree of qualitative comparability was considered remarkable.

. . .

Quantitative Comparability

. . . several conclusions related to quantitative comparisons may be drawn. First, dose-reponse data are often limited: this is especially true for humans. . . . the dose that

> is consumed or administered is often unknown or difficult to determine accurately.
>
> . . .
>
> In the end, scientific judgement, which must take into account all the data available on an agent, will play a role in interpreting the toxicological significance of statistically significant findings.
>
> . . .
>
> A primary objective of the Workshop was to identify which parameters should be assessed in a developmental neurotoxicity battery.
>
> . . .
>
> There was a general agreement that assessment of developmental neurotoxicity should involve an evaluation of multiple categories of function. . . . The protocol includes a battery of tests which evaluate the following functional categories: sensory, motivational/arousal, cognitive, and motor.
>
> . . .
>
> They concluded that the basic battery should not be expected to provide detailed dose-response information or to identify mechanism of action. Rather, the goal of this basic evaluation would be to qualitatively determine whether or not the agent is a potential developmental neurotoxicant.

(RE 253, Exhibit R, JA pp. 3888-3891).

In a book edited by Dr. Renate D. Kimbrough, chapter 11 included: references to numerous studies that used "statistical analysis" with "exposed groups" and "control groups" inferring "good scientific methodology." This

chapter made references to studies done in the Midwest and the Yusho and Yu-cheng studies in Japan and Taiwan as standards for PCB related studies and referred to "Rogan", the author of these studies, as authoritative.

The title of this book is Halogenated biphenyls, terphenyls, naphthalenes, dibenzodioxins, and related products, 2nd Fully Revised Edition by Editors Renate D. Kimbrough, Regional Operations, Environmental Protection Agency, Washington D.C., and Allan A. Jensen, Danish National Institute of Occupational Health, Hellerup, Denmark, 1989, Elsevier, Amsterdam, New York, Oxford. Published by Elsevier Science Publishers, B.V. (Biomedical Division), P.O. Box 211, 1000 AE Amerstdam, The Netherlands. Chapter 11 is titled "General population exposure to environmental concentration of halogenated biphenyls" authored by Henry A. Anderson of the Wisconsin Department of Health and Social Services, Wisconsin Division of Health, P.O. Box 309, Madison WI 53701, USA.

In a Michigan study of the consumption of contaminated fish by pregnant women measuring fetal exposure to PCBs, the study noted that "actual concentrations of pollutants in the fish eaten were unknown." And noted: "Unfortunately, other contaminants such as DDE and DDT which are known to be present in Lake Michigan fish were not investigated as possible confounding exposures." With respect to dose-response, the author cited another study and noted: "Maternal or cord serum PCB levels did not significantly predict these behavioral effects." In another PCB exposure study done of 912 women in North Carolina by Rogan, it was noted that "no associations between birth weight or head circumference and maternal serum PCB residues were observed." (RE 253, Exhibit S, JA pp. 3902-03).

And in a Michigan study of PBB contaminated meat and dairy products, it was noted:

> An extensive medical history, symptom review of medical symptoms and physical examination as well as serum biochemistry and hematology tests were performed. Excessive fatigue (29%) and joint pains (34%) were the most prevalent symptoms in the Michigan farm adults (Anderson, et al., 1978b). These were also the most prevalent symptoms in the control Wisconsin adults but at significantly lower prevalence (15% and 23% respectively). The prevalence of symptoms did not distribute in a positive dose-response relationship with the serum PBB residue levels.
>
> . . . However, no positive dose-response relationship was seen with increasing PBB values.
>
> . . .
>
> An evaluation of dose-response relationships was undertaken by dividing the cohort into seven segments on the basis of serum PBB levels. Consistent with the observations of Anderson et al. (1979), no positive associations were found between serum concentrations of PBBs and reported symptom frequencies. Symptom prevalence rates (excluding volunteers) were slightly higher in persons with no detectable PBB in serum than in those with measurable quantities. Relationships between symptom prevalence rates and serum PBB levels were also

examined with each enrollment group and no positive trends were found; . . .

(RE 253, Exhibit S, JA p. 3909-3912).

And in this same chapter, another study was cited. This study was in Bloomington, Indiana where exposure to PCB contaminated sewer sludge occurred. (This study is similar to the circumstances in the instant case and reflects similar dose-response outcomes.)

> In 1975 and 1976, PCBs were identified in Bloomington, Indiana, in sewer sludge (Bergh and Peoples, 1977) which had been used by 500-1000 community residents as garden fertilizer. The PCBs were found to have been discharged into the sewage system by an electrical capacitor factory. From 1958 to 1971, this plant had used (and discharged) the commercial PCB mixture . . . PCB residues were identified in discharge from the capacitor plant in sewage, in sludge, in sludge-treated soil, and in vegetables grown in the treated soil.
>
> To study the epidemiology and metabolic consequences of human exposure to PCB from sludge, Baker et al. (1980) conducted medical and biochemical evaluations of 89 Bloomington residents who had been exposed to sludge, either directly through having applied it to their gardens or indirectly through having eaten vegetables growing in sludge-enriched soil. They also examined 18 workers with occupational exposure to PCB, 19

> members of those workers' families, and 22 persons who had no known occupational or other identified exposure to PCB. . . . Serum PCB levels in the 89 persons exposed to sludge were not significantly different from those of the 22 community residents without sludge exposure.

(RE 253, Exhibit S, JA pp. 3913-14).

Chapter 12, of this book edited by Renate Kimbrough is titled: "Background levels in humans" authored by Allan Astrup Jensen of the Danish National Institute of Occupational Health, Copenhagen, Denmark. This chapter evaluates dose-response testing such as PCBs and related chemicals in human blood, in adipose tissue, and in other human tissues, and the factors affecting the levels thereof. Under the sub-section entitled "Analytical problems", it states:

> A generally accepted quantitation procedure for the determination of the total PCB content in human tissue samples does not exist. Quantitation is normally accomplished by comparison of peak height, or peak area of selected peaks, in chromatograms from samples and standard mixtures. The PCB standard mixture selected varies between investigators because no standard mixture exists with the same peak pattern as in human tissues.

(RE 253, Exhibit X, JA p. 3936).

Another study is titled "Memory Performance of Chemical Workers Exposed to Polybrominated Biphenyls"

authored by Gregory G. Brown and Richard C. Preisman of the Psychiatry department, Henry Ford Hospital, Marvin D. Anderson, Robert K. Nixon, Second Medical Division, Henry Ford Hospital, John L. Isbister and Harold A. Price of the Department of Public Health, State of Michigan, Lansing 48909.

In this study twenty-five chemical workers were evaluated using the following tests:

1. Predicted IQ
2. Full Scale IQ
3. Verbal IQ
4. Performance IQ
5. Education (Years)
6. Age (Years)
7. Wechsler Memory Quotient
8. Prose (number of ideas)
9. Geometric designs
10. Word Pairs (weighted total)
11. Short-term memory distractor test
12. Short-term memory with 10-second interval
13. Short-term memory with 20-second interval
14. Distraction
15. Paired associate learning

(RE 253, Exhibit T, JA p. 3920). Again, these tests were also utilized by petitioners' experts.

There are three recent "peer reviewed," "scientific publications" written by petitioners' expert Dr. Kaye Kilburn showing the same testing procedures and methodologies as those used in the instant case in Lobelville, Tennessee, that have been published, reviewed, and accepted by the scientific

community. The tests used and symptoms found were the same as in the Lobelville testing procedures.

The first is titled "Neurobehavioral Dysfunction in Firemen Exposed to Polychlorinated Biphenyls (PCBs): Possible Improvement after Detoxification" authored by Kaye Kilburn, M.D. of the University of Southern California School of Medicine, Environmental Sciences Laboratory, Raphael H. Warsaw, of Workers' Disease Detection Services of San Dimas, California, and Megan G. Shields, M.D. of the Foundation for Advancements in Science and Education, Los Angeles, California. This study was peer reviewed and published in the "Archives of Environmental Health", published by Heldref Publications, Washington D.C. The study states:

> ABSTRACT. Fourteen firemen exposed to polychlorinated biphenyls (PCBs) and their by-products generated in a transformer fire and explosion had neurophysiological and neuropsychological tests 6 months after the fire. . . . A case-control comparison with firemen matched from the same department, but who did not participate in controlling the transformer fire . . . These signs of protracted neurobehavioral impairment were attributed to PCBs and heat-produced by-products. No relationship, however, was found between the firemen's serum or fat levels of PCBs as Arochlor 1248 and their type or degree of neurobehavioral impairment.

The exposed firemen showed significant impairments associated with the following tests:

1. Wechsler' Memory Scale Test
   A. Memory for Stories
   B. Memory for visual images
   C. Memory for Digits backwards.

2. Cultural Fair 2A and 2B
   A. Cognitive function for identifying embedded figures
   B. Cognitive function for design association and recognition
   C. Making of trails and choice reaction time
   D. Perceptual motor speed (coordination)

3. Body Balance Test-eyes open/eyes closed

4. Wechler Adult Intelligence Scale

5. Profile of Mood States (POMS)

6. Visual Two Choice Reaction Time (CRT) Test

7. Two Dimensional Block Design Test

8. Halsted-Reitan Battery Test
   A. Dexterity
   B. Coordination
   C. Decision making
   D. Peripheral sensation

The symptoms found in the fourteen fireman after the PCB exposure were as follows:

1. Disorders of Skin, eyes and liver
2. Pain in the limbs with accompanying weakness

3. Chloracne
4. Hirsuteness
5. Blepharoconjuctivitis
6. Heptic dysfunction,
7. Porphyria cutaniea tarda
8. Loss of peripheral sensory and motor function
9. Reduction of nerve conduction velocity
10. Extreme fatigue
11. Headaches
12. Muscle Weakness
13. Aching joints
14. Memory loss
15. Impaired ability to concentrate
16. Irritability
17. Insomnia
18. Impaired balance
19. Hypertension
20. Weight loss

(RE 253, Exhibit Y, JA pp. 3972-3978).

The second study done by Dr. Kaye Kilburn is titled "Neurobehavioral Testing of Subjects Exposed Residentially to Groundwater Contaminated from an Aluminum Die-Casting Plant and Local Referents" authored by Kaye Kilburn M.D. of the University of Southern California School of Medicine, Environmental Sciences Laboratory, and Raphael H. Warsaw of Workers' Disease Detection Services of San Dimas, California. This article has also been peer reviewed and published in the Journal of Toxicology and Environmental Health, 39:483-486, 1993.

This study involved the neighbors to an Aluminum Die- Casting Plant that started in 1956 that used up to 100,000 gallons per year of PCBs that contaminated local wells from

which the local residents drank. One hundred seventeen exposed persons and forty-six non-exposed persons were studied.

The tests performed were as follows:

1. Four main categories tested:
   A. neurophysiological
   B. neuropsychological
   C. affective (mood state)
   D. background questionnaire
2. Abnormal blink reflex test
3. Digital symbol-WAIS-Wechler test tested attention and integrative capacity
4. Embedded figures tested discriminatory perception (Valciukas and Singer 1982)
5. Halsead-Reitan Battery (Reitan, 1958, 1966; Matthewa et al. 1970)
   A. Dexterity
   B. Coordination
   C. Decision making
   D. Peripheral sensation
   E. Discrimination
6. Profile of Mood State (POMS) (McNair and Lorr, 1967, MecNair et al. 1971/1981) assesses emotional status.

(RE 253, Exhibit Z, JA pp. 3980-3990).

The third peer reviewed and accepted publication written by Dr. Kilburn is the study he did with the PCB exposed group of petitioners and the non-exposed control groups. This is titled "Visual and Neurobehavioral Impairment Associated with Polychlorinated Biphenyls." This study was published in Neurotoxicology in April of 2000

by Intox Press, Inc. In this study it is noted: "There were no competing chemical exposures, confounding factors or other explanations for the findings. Long residential exposure to PCBs was associated with visual defects and impaired neurophysiologic and neuropsychologic functions." Unfortunately, this study was not published prior to the record being compiled in the Sixth Circuit, and is the reason why the Sixth Circuit didn't consider the study to be peer reviewed and accepted by the scientific community.

"Neurotoxicology of PCBs and Related Compounds" is another publication authored by Walter J. Rogan and Beth Gladen. This paper was published in the Neurotoxicology 13: 27-32, 1992, and was presented at the Third Meeting of the International Neurotoxicology Association, July 1-5, 1991, in Salsomaggiore Terme (Parma), Italy.

Tests performed by various scientists related to subjects and exposed persons referred to in this article are as follows:

A. Reflex tests
B. Neurologic exam
C. Cognitive development tests
D. Behavioral assessment
E. Taking home survey (history)
F. Verbal IQ test
G. WISC
H. Psychomotor, Fine motor coordination

Rogan used similar tests as those used by petitioners' experts. The publication refered to the Yucheng study by Rogan who examined 117 children and compared them to unexposed neighborhood children. He did reflex and neurological examinations. Hsu and collegues did testing of cognitive

development and behavioral assessments in the home after taking a survey, using new control matched for neighborhood, sex, age, sib order, and family socioeconomic status. He did Verbal IQ tests on the WISC (Wechlers). The exposed children always scored lowed than the controls on the three developmental/cognitive tests used. On the Rutter scales of behavior, the exposed children showed worse scores on all three scales.

U.S. Studies referred to in article used the Psychomoter Index from Bayley Scales of Infant Development. They focused on "fine motor coordiation." The McCarthy Scales were used by Kaufman and Kaufman in 1977. This test had 18 items grouped into 6 scales.

1. The general cognitive scale. This is a combination of the scales listed as 2, 3 & 4.
2. The verbal performance scale
3. The quantitative performance scale
4. The perceptual performance scale
5. The Motor scale is a combination of two drawing tasks from the perceptual performance scale plus 3 coordination tasks.
6. The memory scale has items from perceptual performance, quantitative and verbal.

Again, petitioners' experts used similar tests, but also studied control groups. In the above studies done on "Workers" they did not even use a "control group" which they admitted made it harder to evaluate. This study that is referred to and considered as "scientific" was done by Fitzgerald et al. (1986). As stated, no control group was used and no "dose-response" procedure was used. A sensory test was used. Tests given for discovery of axonopathy were cognition and perceptual motor tests.

In this publication, Walter Rogan and Beth Gladen who are two of the most respected scientific authors of the Environmental Industry make reference to petitioners' expert Dr. Kaye Kilburn's article and his study which is in the Record. (RE 253, Exhibit Y, JA pp. 3971-3978). This study of Dr. Kilburn describes the PCB exposure of 14 Firemen injured in 1989. These two scientists, by making reference to Dr. Kilburn's article are giving approval and scientific acceptance to the nature of the tests performed. Dr. Kilburn is being cited as one of the "authorites" from which other scientists can rely on and make reference to as an "authority" in the PCB scientific community.

The publication or book "Toxicology Desk Reference-The Toxic Exposure and Medical Monitoring Index", Third Edition, 1996 Volume III", is edited by Robert P. Ryan Ph.D., D.A.B.T. and Claude E. Terry, Ph.D., D.A.B.T. published by Taylor and Francis Publishers. In this book, it states that, "Polychlorinated biphenyls (PCB's) may cause adverse health effects following exposure via inhalation, ingestion, or dermal contact." The book then goes on to list the adverse health effects caused by PCBs as follows:

CLINICAL EFFECTS:

OVERT CLINICAL SYMPTOMS -

> The overt symptoms caused by polychlorinated biphenyls include: chloracne, which can occur from dermal contact or systemic absorption; nausea; intense perspiration; gastrointestinal upset; and diarrhea.

HEENT -

The HEENT effects caused by polychlorinated biphenyls include: irritation of the eyes, nose, and throat; subcutaneous focal edema; swelling of the eyelids; cheese-like discharge from the eyes; transient visual disturbances; hyperemia of the eyelids; and hearing difficulties.

NEUROLOGICAL -

The neurological effects caused by polychlorinated biphenyls include: dizziness; nervousness; headache; reversible decreases in sensory conduction velocity (SCV) of the sural and ulnar nerves, indicative of weakness of the extremities; numbness of the extremities; cognitive impairment; and memory loss.

HEPATIC -

The hepatic effect caused by polychlorinated biphenyls is development of hepatitis.

The symptoms associated with toxic hepatitis include: nausea; vomiting; jaundice; stupor; and coma may follow exposure. Toxic effects on kidney, brain, or bone marrow may be more conspicuous than the hepatic involvement.

RESPIRATORY -

The literature search did not reveal reports of human clinical effects in this area.

RENAL -

The literature search did not reveal reports of human clinical effects in this area.

CARDIOVASCULAR -

The cardiovascular effect caused by polychlorinated biphenyls is hypertension.

REPRODUCTIVE -

The reproductive effects caused by PCB's include: embryotoxicity which can cause stillbirths; neurological impairment such as cognitive impairment, memory loss, and psychomotor impairment which have been seen in children exposed *in utero*; and irregular menstrual cycles.

CARCINOGENIC ASSESSMENT -

Polychlorinated biphenyls have been classified by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (IARC Category 2A), and by the National Toxicology Program (NTP) as reasonably anticipated to be carcinogenic (NTP Category 2B). The types of cancers which have been

associated with human exposure to polychlorinated biphenyls include melanoma of the skin, lymphatic and hematopoietic.

The book then goes on to list the following tests:

NEUROLOGICAL EVALUATION TESTS

The monitoring for neurological disease in the workplace has not been routinely performed in the past. Sensitive tests are being developed that have the potential to detect preclinical effects of exposure to neurotoxic compounds. Tests that are available for neurological assessment are listed below. Selection of the appropriate neurological evaluation tests should be at the discretion of the physician.

Evaluation of Peripheral Neuropathy

1. Nerve conduction study
2. Electromyography (EMG).
3. Quantitative sensory testing
4. Thermography

Evaluation of Central Nervous System Effects

Evaluation of CNS effects can be performed through neuropsychological assessment, which consists of a clinical interview and administration of standardized personality and neuropsychological tests. The areas that the neuropsychology test batteries focus on include the domains of

memory and attention; visuoperceptual, visual scanning, visuospatial, and visual memory; and motor speed and reaction time. There is limited data on which components of the test batteries are best indicators of early CNS effects.

Evaluation of Cranial Neuropathies

Evaluation of cranial nerve damage, as evidenced by symptoms such as loss of balance, visual function, smell, taste, or sensation on the face, can be accomplished through a physical examination focusing on tests such as:

Smell assessment

- standardized odor threshold and identification testing

Vision assessment

- standard acuity tests, visual field tests, contrast sensitivity, and color vision measurements (vision assessment)

Facial and Trigeminal Nerve assessment

- blink reflex (pontogram)

Vestibular assessment

- Pure tone audiometry for bone- and air-conducted sounds
- Threshold decay at 4kHz
- Speech discrimination and speech reception
- Tympanograms and acoustic thresholds
- Electronystagmograms

Hearing assessment

- auditory testing

Again, these are the same procedures used by petitioners' experts. Moreover, this toxicology desk-reference book specifically notes that biological tests for monitoring PCB exposure have not been established for determining "exposed" or "toxic" levels in human blood, serum or plasma, or urine. This book specifically states: "The literature search did not reveal reports of serum PCB levels that correlated with exposure levels or the onset of adverse health effects." This desk-reference book also cites to a case report in which fourteen chemical plant workers were exposed to PCB's for nineteen months via a leaking heat exchanger. Under the subsection, "Biological Monitoring Employed", the case study reports that there "were no monitoring tests employed; only clinical effects were assessed." Under the subsection "Levels in Body", the study states, "Not applicable". (RE 253, Exhibit OO, JA pp. 4190-4202).

Dr. Kilburn's expert testimony has been admitted for jury consideration in numerous cases. He testifies at approximately two trials per year. One such example is a chemical toxic case, Case No. 93-04142-D in the 95th Judicial District Court, County of Dallas, Texas, where defense counsel's *Daubert* motion to have the testimony excluded was denied. (RE 223, Exhibit B, JA p. 2678). For obvious reasons there are no citations or written court opinions available for trial jury verdicts rendered wherein Dr. Kilburn's testimony was admitted. But they are numerous and include the following more recent trials:

1) Case No. 95-1080 in the U.S. District Court, Western District of Arkansas, El Dorado Division;
2) Case No. 91-18397 in the Civil District Court for the Parish of Orleans, Div. F, Louisiana;

3) Case No. 33,535 in the 29th Judicial District Court, Parish of St. Charles, Div. D, Louisiana;
4) Case No. 45,251 in the 23rd Judicial District Court, Parish of Ascension, Div. A, Louisiana;
5) Case No. 92-03370 in the 21st Judicial District Court, Parish of Tangipahoa, Louisiana;
6) Case No. 95-1035 in the 14th Judicial District Court, Parish of Calcasieu, Louisiana;
7) Case No. CV93-17823 in the Superior Court of Arizona, Maricopa County;
8) Case No. 98-2-03931-5 in the Superior Court of Washington, Spokane County;
9) Case No. CV95-10454 in the Superior Court of Arizona, Maricopa County;
10) Case No. 761810033697 in the American Arbitrators Association, Arizona;
11) Case No. 95-02602 in the 192nd Judicial District Court, County of Dallas, Texas; and
12) Case No. 93-04142-D in the 95th Judicial District Court, County of Dallas, Texas.

Dr. Kilburn did test for confounding factors. Dr. Kilburn studied the exposed group and two non-exposed control groups. The exposed group was in Lobelville, Tennessee. One control group was comprised of persons from Columbia and Waverly, Tennessee, the latter consisted of persons of the Mormon faith, and another control group in Arizona, which consisted of the general populace. Dr. Kilburn used two statistical analysis to compare the exposed and control groups. First, he used the analysis of variance to test the hypothesis that the mean responses of the two groups were equal for each test. Then he used the analysis of covariance to adjust for differences between the two groups with respect to confounding factors. There were no statistically significant differences between the control group

in Columbia and the Mormon control group in Waverly, accounting for the effects of alcohol, drug, and tobacco use in the study. Dr. Kilburn also used the Arizona control group to predict normal ranges for the laboratory results. As for the Mormon control group, in the scientific community, the Morris equations have been used for years to predict normal pulmonary function. Morris equations were derived using data obtained from Mormon populations. There are several different sets of prediction equations being used to predict normal pulmonary function. Prediction equations are used to predict normal values. The results of the testing batteries showed the Lobelville exposed group to be statistically significant compared to both the control groups. Both non-exposed groups in Tennessee showed statistically equivalent, compared to the exposed group. A noted Ph.D., John Thornton, with over one-hundred publications himself, supported and defended Dr. Kilburn's statistical analysis for testing confounding factors. (RE 223, Exhibits C1 & C2, JA pp. 2679-2729).

ARGUMENT

Fed. R. Evid. 702 governs the admissibility of "scientific, technical, or other specialized knowledge" offered through an expert, someone who through academic training, research, experience, or a combination of these, is qualified to provide opinion testimony to the jury. Rule 702 states in full:

> If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or

education, may testify thereto in the form of an opinion or otherwise.

The Supreme Court cases most important in this appeal are *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), and its progeny, *General Electric Co. v. Joiner*, 522 U.S. 136, 118 S.Ct. 512, 139 L.3d.2d 508 (1997); and *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999).

For a correct analysis of expert testimony under *Fed. R. Evid. 702*, an examination of the Supreme Court cases is required. Jason Daubert was a minor child born with serious birth defects. Plaintiffs alleged Jason's mother ingested Bendectin, a prescription anti-nausea drug Merrell Dow manufactured and marketed, and claimed the Bendectin caused Jason's birth defects. The district court granted Merrell Dow's motion for summary judgment. It held plaintiffs' scientific evidence suggesting Bendectin could cause birth defects lacked sufficient "general acceptance" in the scientific field. The Ninth Circuit Court of Appeals affirmed the summary judgment, applying the *Frye* test.

On appeal in *Daubert*, the United States Supreme Court jettisoned *Frye*, holding that *Fed. R. Evid. 702* displaced it. Under Rule 702, the trial court's focus shifts from ruling on general acceptability of the expert's underlying methodology (an inquiry often thrusting judges into the role as an arbiter of scientific or technical "truth") to determining if the expert's proposed testimony "will assist the trier of fact to understand the evidence or to determine a fact in issue."

Under *Daubert*, the trial court's determination if an expert's testimony will assist the jury first requires a finding

that the testimony is relevant to an issue in the action. That act is not too difficult. The difficulty arises when the trial court must make a "preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and . . . properly can be applied to the facts in issue." *Daubert*, 509 U.S. at 592-93. This "preliminary assessment," ensuring "any and all scientific testimony or evidence admitted is not only relevant, but reliable" has been labeled the trial court's "gate-keeping" function. *Daubert*, 509 U.S. at 589. The proponent of the expert testimony need not prove the expert is correct, only that his testimony is reliable. *In re Cudd Pressure Controls, Inc.*, 1999 WL 756439 (E.D. La., Sept. 24, 1999), slip op. at 1. If the expert's methods and opinions "fit" the case, then it should be up to the jury to decide the weight given the expert testimony. *Kumho Tire*, 1197 S.Ct. 1167.

The District and Sixth Circuit Courts both acknowledged that the credentials of each of the petitioners' experts were impressive. They further acknowledged that the underlying tests performed by the petitioners' experts had a valid scientific foundation.

When Dr. Kilburn formulated the two non-exposed test groups, the "Columbia Group" names were taken randomly from the voter registration roles. By using random names from voter registration roles, the group statistically included smokers, non-smokers, persons that use alcohol/drugs, persons who live in trailer homes, etc. When the "Waverly Group" was selected, the selection methodology used persons who probably were not smokers or alcohol/drug users. The significant result from these two groups is that there were no statistically significant differences between them.

In regards to the exposed "Lobelville Group" all of the same factors were present; such as, trailer ownership, smokers/non-smokers, alcohol/drug users, etc. The only significant difference between the individuals that were part of the Lobelville Group and the other groups was the one fact exposure to PCBs.

The scientific methodology of Dr. Kilburn is the same scientific methodology used by the PCB scientific community. Dr. Kilburn and Dr. Hirsch are not like the hypothetical "all-purpose engineer" referred to in *American Computer Innovators, Inc. v. Electronic Data Systems Corp.*, 1999 WL 1021049 (D.Mass), that attempts to render professional opinions about "everything from refrigerators to diapers to airplane engines." Dr. Kilburn has spent the last forty years of his life going on-site to locations where toxic chemicals have been released into the environment and has personally tested individuals using the scientifically approved methodologies and testing protocols.

As mentioned earlier, the results of the testing in the Lobelville area and Dr. Kilburn's opinions were published last year. His opinions have been peer-reviewed, accepted and cited as authority. Dr. Kilburn has been accepted as an expert in numerous state and federal courts.

Justice Scalia wrote in his concurring opinion in *Kumho Tire, supra*:

> [The trial court's] discretion in choosing the manner of testing expert reliability—-is not discretion to abandon the gatekeeping function. I think it worth adding that it is not discretion to perform the function inadequately. *Rather it is discretion to choose among reasonable*

means of excluding expertise that is fausse and science that is junky. Though, as the Court makes clear today, the Daubert factors are not holy writ, in a particular case the failure to apply one or another of them may be unreasonable, and hence an abuse of discretion. [Emphasis added.]

It is clear that *Daubert* and its progeny were not intended to exclude the expert witnesses such as the ones presented in this case; that have spent their entire lives doing hands-on testing and related to the opinions that they have rendered in this case.

The other area of "abuse of discretion" that occurred at the District Court and Sixth Circuit in this case is that those Court's ignored the fact that the PCBs and related chemicals that are the subject of this lawsuit are chemicals that by legislative edict have been determined to be "toxic and hazardous" chemicals that are so dangerous that Congress, in the Environmental Protection Act (40 CFR Ch.1, 7-1-90 Ed., section 761) passed laws to not only control the release of these chemicals into the environment, but also entirely banned the manufacture, use, and distribution of these chemicals. (RE 253, Exhibit D, JA pp. 3542-3555). By the wording of this Act, it is clear that exposing individuals to PCBs in excess of 50ppm is not only a violation of the law for which said parties may be punished, but is also very harmful to those persons being exposed.

Dr. Kilburn and Dr. Hirsch used scientific methodologies accepted by the scientific community. They based their opinions on scientific facts that were personally obtained by themselves or their staff members pursuant to their specific instructions. They used statistical analysis as

part of that methodology to make sure that they did not put undue weight on isolated instances or factors. These experts are qualified, competent and have based their opinions on the same valid testing methodology and procedures that the PCB scientific community has clearly stated should be used in PCB and related chemical exposure studies. There is no great "leap" between the testing methodologies used, results found, and the opinions rendered by these experts. These experts should be allowed to testify. Defense counsel can attack the credibility of their testimony and the opposing experts credibility can be weighed by a jury. But certainly the nature of their testimony would be helpful to the jury and should no be excluded.

At an absolute minimum, this case should be remanded allowing petitioners' experts to supplement or expand their methodologies if the Court thinks it deficient.

CONCLUSION

For the reasons stated above, this Court should grant this Petition for Certiorari, and should reverse the Judgment of the United States Sixth Circuit Court of Appeals.

Respectfully submitted,

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APPENDIX A

UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

[Decided and Filed March 9, 2001]

No. 99-6618

James L. Nelson,
Appellant,

v.

Tennessee Gas Pipeline Co.
Appellee.

Appeal from the United States District Court
for the Western District of Tennessee at Jackson.
No. 95-01112—J. Daniel Breen, Magistrate Judge.

Argued: February 2, 2001

Before: GUY, NORRIS, and SILER, Circuit Judges.

OPINION

RALPH B. GUY, JR., Circuit Judge. Plaintiffs appeal from denial of their motion to alter or amend the court's earlier orders excluding plaintiffs' expert witness testimony

and granting summary judgment to defendants on all of the plaintiffs' personal injury claims. Plaintiffs alleged that they were injured by environmental exposure to polychlorinated biphenyls (PCBs), which were released into the air, water, and soil surrounding a natural gas pipeline pumping station located in Lobelville, Tennessee. Defendants are the Tennessee Gas Pipeline Company (TGPC), which operated the station, and its parent company El Paso Tennessee Pipeline Company (formerly known as Tenneco, Inc.).

Plaintiffs claim that the district court abused its discretion by excluding the expert testimony of Kaye H. Kilburn, M.D., and Alan R. Hirsch, M.D., under Fed. R. Civ. P. 702 and the standards adopted in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Plaintiffs also argue that the district court abused its discretion by failing to either hold an evidentiary hearing on the motions *in limine*, or provide plaintiffs an opportunity to offer other expert testimony. After careful review of the record, the applicable law, and the arguments presented on appeal, we find no abuse of discretion and affirm for the reasons ably articulated in the magistrate judge's order of August 31, 1998.[1] We write additionally to address the plaintiffs' specific claims of error.

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[1]*See Nelson v. Tenn. Gas Pipeline Co.*, 1998 U.S. Dist. LEXIS 22769, No. 95-1112, 1998 WL 1297690 (W.D. Tenn. Aug. 31, 1998).

I.

Defendants operate a natural gas pipeline running from the Gulf Coast to New England and numerous compressor stations along the way that restore pressure to the natural gas. The compressor station in Lobelville, Tennessee (Station 79), is located on property along the Marrs Branch Creek. Plaintiffs, who lived, worked, or spent time near Station 79 and the Marrs Branch Creek, alleged that defendants' use of Pydraul AC as a lubricant in the compressors at Station 79 resulted in the release of PCB-contaminated condensates into the environment.

Until 1971, Pydraul AC was manufactured with a fire-retardant PCB known as Aroclor 1254 in concentrations of 500 parts per million (ppm) or greater. Defendants purchased this lubricant for use at Station 79 between 1954 and 1969. In 1978, Congress banned the production and sale of PCBs and the use of PCBs other than in a totally enclosed manner, with some limited exceptions. *See* 15 U.S.C. § 2605(e)(2)(A). The EPA issued regulations, effective July 2, 1979, restricting the manufacture, distribution, use, storage, and disposal of PCBs. *See* 40 C.F.R. §§ 761.1-761.218. Plaintiffs maintain that PCBs have been detected on and near the site in concentrations that exceed allowable amounts. In 1993, the EPA charged defendants with improper use and disposal of PCB-contaminated condensates and materials at Station 79 as well as thirty-five other compressor stations. A consent decree was entered in August 1994, under which Tenneco paid over $6 million in civil penalties and agreed to set aside funds for cleanup efforts.

Plaintiffs commenced this action in May 1995, alleging that they suffered injuries as a result of long-term environmental exposure to PCBs. Plaintiffs' claims are brought under the tort theories of negligence, trespass, nuisance, and strict liability. In January 1997, the parties selected seven "flagship plaintiffs" who consented to having the magistrate judge resolve their claims, and the case was reassigned to the magistrate judge for all further proceedings and entry of judgment. To establish medical causation, plaintiffs relied upon the expert testimony of Drs. Kilburn and Hirsch. Kilburn studied ninety-eight adults from Lobelville, including the seven flagship plaintiffs, and compared them to a control group of fifty-eight adults from other Tennessee communities.[2] Kilburn's results were set forth in a paper entitled *Visual and Neurobehavioral Impairment Associated with Polychlorinated Biphenyls (PCBs) From a Natural Gas Pipeline*. Kilburn and Hirsch also conducted separate evaluations of the seven flagship plaintiffs.

Defendants moved to exclude the testimony of Kilburn and Hirsch. Defendants also filed a motion for summary judgment arguing that without that expert testimony, plaintiffs could not establish causation. On August 31, 1998, the magistrate judge issued his decision excluding the testimony because it did not meet the standards for admission of scientific evidence under *Daubert* and its progeny. In a separate order entered a few days later, the magistrate judge granted summary judgment to defendants as to plaintiffs'

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[2]Of the ninety-eight Lobelville subjects, ninety-four were plaintiffs in this action before being evaluated and several more joined the lawsuit later.

personal injury claims on the grounds that the evidence was insufficient to establish by a preponderance of the evidence that plaintiffs suffered personal injuries as a result of exposure to PCBs from Station 79.

Plaintiffs filed a motion to amend these orders arguing that the magistrate judge misunderstood "the extent of the evidence present in this case to support the validity of the plaintiffs' medical expert testimony." Although the motion was made under Fed. R. Civ. P. 52(b), which contemplates a trial without a jury, the motion was nonetheless treated as a timely motion to alter or amend judgment under Fed. R. Civ. P. 59(e). After full briefing, the magistrate judge denied plaintiffs' motion because they had not shown a clear error of law, newly discovered evidence, an intervening change in the law, or manifest injustice. *See GenCorp., Inc. v. Am. Int'l Underwriters*, 178 F.3d 804, 834 (6th Cir. 1999). This timely appeal followed.

II.

We review the magistrate judge's decision to exclude the testimony of plaintiffs' expert witnesses for an abuse of discretion, even when that decision results in the entry of summary judgment. *Gen. Elec. Co. v. Joiner,* 522 U.S. 136, 142-43 (1997). Further, the same abuse of discretion standard applies to the magistrate judge's decisions regarding *how* to determine the admissibility of the evidence in question. *Kumho Tire Co. v. Carmichael,* 526 U.S. 137 (1999). "A district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or a clearly erroneous assessment of the evidence." *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 405 (1990).

A. Evidentiary Hearing

Quoting at length from *In re TMI Litigation*, 199 F.3d 158, 159 (3d Cir. 2000), *modifying* 193 F.3d 613 (3d Cir. 1999), *cert. denied*, 120 S. Ct. 2238 (2000), plaintiffs contend that the magistrate judge abused his discretion by deciding defendants' motions *in limine* without ordering an evidentiary hearing. Plaintiffs concede that they did not request a hearing, but imply that a hearing is always required. On the contrary, we have stated that the district court is not required to hold an actual hearing to comply with *Daubert*. *See Greenwell v. Boatwright*, 184 F.3d 492, 498 (6th Cir. 1999). While we did not analyze the issue in *Greenwell*, the Supreme Court's decision in *Kumho* makes clear that whether to hold a hearing is a question that falls within the trial court's discretion.

> The trial court must have the same kind of latitude in deciding *how* to test an expert's reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides *whether or not* that expert's relevant testimony is reliable.

Kumho, 526 U.S. at 152 (emphasis in original). With this in mind, we find no abuse of discretion by the magistrate judge in failing to order an evidentiary hearing on the motions *in limine*. The admissibility of the testimony of Kilburn and Hirsch under *Daubert* was fully briefed by the parties. Further, it is clear from the extensive record and the magistrate judge's opinion that there was an adequate basis from which to determine the reliability and validity of the

experts' opinions.[3]

B. Opportunity to Cure

Plaintiffs also claim that the magistrate judge abused his discretion by not affording them an opportunity to obtain expert testimony to remedy deficiencies in the proffered testimony before granting summary judgment. They argue that considerations of equity and fair play demand that they have an opportunity to cure the deficiencies in their proofs. This assertion, made without any authority to support it, is

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[3]Even under the Third Circuit's approach, which we have not adopted, plaintiffs could not demonstrate an abuse of discretion in this case. In *TMI*, the court stressed its belief that in limine hearings are important in making reliability determinations, even in the absence of a request for one; especially when the exclusion of evidence under *Daubert* will result in summary judgment being granted. *See TMI*, 199 F.3d at 159 (quoting *Padillas v. Stork-Gamco, Inc.*, 186 F.3d 412, 417 (3d Cir. 1999)). A hearing is important, the court explained, "because of the district court's 'independent responsibility for the proper management of complex litigation'" and in order that the plaintiff have "'an opportunity to be heard' on the critical issues of scientific reliability and validity." *Id.* (quoting *Padillas*, 186 F.3d at 417). Distinguishing *Padillas*, the court in *TMI* also clarified that *Padillas* was not intended to suggest that a hearing is always required for *Daubert* gatekeeping. In fact, the Third Circuit recently distinguished *Padillas* because there the expert's opinion was so conclusory and the record so scant that the district court could not have evaluated how the expert arrived at his opinions. *See Oddi v. Ford Motor Co.*, 234 F.3d 136, 151-54 (3d Cir. 2000) (petition for cert. filed 1/11/01).

without merit. Plaintiffs had adequate opportunity to develop their expert testimony, test their theories, and respond to defendants' specific challenges to the testimony. We recently rejected a similar claim that the district court abused its discretion by refusing a request to reopen the *Daubert* inquiry after the plaintiff's proffered expert testimony was found to be inadmissible under Rule 702. *See Pride v. BIC Corp.*, 218 F.3d 566, 578-79 (6th Cir. 2000).

Also instructive is the decision in *Weisgram v. Marley Co.*, 528 U.S. 440 (2000), which involved a challenge to the admissibility of expert witness testimony in a product liability action. Over the defendant's objections, the plaintiff offered the testimony of three expert witnesses and obtained a favorable verdict at trial. After the court of appeals found that the expert witness testimony did not satisfy *Daubert* and instructed that judgment be entered as a matter of law, the Supreme Court held that an appellate court's authority "to direct the entry of judgment as a matter of law extends to cases in which, on excision of testimony erroneously admitted, there remains insufficient evidence to support the jury's verdict." *Id.* at 457. In so holding, the Supreme Court observed the following:

> It is implausible to suggest, post-*Daubert*, that parties will initially present less than their best expert evidence in the expectation of a second chance should their first try fail. We therefore find unconvincing [plaintiff's] fears that allowing courts of appeals to direct the entry of judgment for defendants will punish plaintiffs who could have shored up their cases by other means had they known their

> expert testimony would be found inadmissible. . . . In this case, for example, although [plaintiff] was on notice every step of the way that [defendant] was challenging his experts, he made no attempt to add or substitute other evidence.

Id. at 455-56. We likewise find that fairness does not require that a plaintiff, whose expert witness testimony has been found inadmissible under *Daubert*, be afforded a second chance to marshal other expert opinions and shore up his case before the court may consider a defendant's motion for summary judgment.

C. *Daubert* Inquiry

In *Daubert*, the Supreme Court held that the Federal Rules of Evidence, in particular Fed. R. Evid. 702[4] and

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[4]Effective December 1, 2000, Fed. R. Evid. 702 was amended to reflect the *Daubert* inquiry and now reads:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, *if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.*

104(a), govern the admission of expert witness testimony and require that the trial judge "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert*, 509 U.S. at 589. The Supreme Court clarified in *Kumho* that this gatekeeping obligation applies to all expert testimony. *Kumho*, 526 U.S. at 141. In discussing scientific knowledge, the Court in *Daubert* explained:

> The adjective "scientific" implies a grounding in the methods and procedures of science. Similarly, the word "knowledge" connotes more than subjective belief or unsupported speculation. . . . Of course, it would be unreasonable to conclude that the subject of scientific testimony must be "known" to a certainty; arguably, there are no certainties in science. . . . But, in order to qualify as "scientific knowledge," an inference or assertion must be derived by the scientific method. Proposed testimony must be supported by appropriate validation--*i.e.*, "good grounds," based on what is known. In short, the requirement that an expert's testimony pertain to "scientific knowledge"

Id. (emphasis added). The emphasized language, added by the amendment, is consistent with the gatekeeping function articulated in *Daubert* and *Kumho*. The Advisory Committee Notes explain that no specific factors were articulated in the new rule because the factors mentioned in *Daubert* are neither exclusive, nor dispositive, and do not apply to every type of expert testimony. We are satisfied that the amendment to Fed. R. Evid. 702 does not alter the standard for evaluating the admissibility of the experts' opinions in this case.

establishes a standard of evidentiary reliability.

Daubert, 509 U.S. at 590. In addition, Rule 702 requires that the testimony "assist the trier of fact to understand the evidence or to determine a fact in issue." This question of relevance, described as "fit," "is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes." *Id.* at 591. Thus, the trial judge, faced with a proffer of expert scientific testimony, must determine whether the expert

> is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.

Id. at 592-93 (footnote omitted). It is the proponent of the testimony that must establish its admissibility by a preponderance of proof. *See Daubert*, 509 U.S. at 592 n.10.

The Court in *Daubert* identified several factors that may bear on the inquiry, but took care to emphasize that the inquiry is "a flexible one." *Id.* at 594.[5] In *Kumho*, the Court

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[5]Those factors were: (1) whether a theory or technique can be or has been tested; (2) whether it has been subjected to peer review and publication; (3) whether a technique has a known or potential rate of error and the existence of standards controlling its operation; and (4) whether the theory or technique enjoys general

reiterated that the factors mentioned in *Daubert* were neither definitive, nor exhaustive, and may or may not be pertinent to the assessment in any particular case. *Kumho*, 526 U.S. at 141. Noting that the *Daubert* factors will often be appropriate in determining reliability, the Court in *Kumho* found that the trial court must consider whether the factors are reasonable measures of reliability in a given case. *Id.* at 152.

After careful review of the voluminous record in this matter and the extensive arguments of the parties, we are convinced that the magistrate judge did not abuse his discretion in determining that the testimony of plaintiffs' expert witnesses was not grounded upon valid scientific methodology and was not reliable. Since the magistrate judge's opinion correctly states the law and thoroughly analyzes the appropriate factors in determining the reliability of the expert witnesses' testimony, it would serve no useful purpose to re-state the evidence presented or the reasoning with which we agree. Instead, we will directly address plaintiffs' challenges on appeal.[6]

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acceptance in a relevant scientific community.

[6]Acknowledging *Daubert*, plaintiffs nonetheless question its wisdom and urge that we "temper" the gatekeeping function in this case because they have alleged that a subsidiary with $20 billion in annual revenue inexcusably "dumped" PCBs into the environment knowing that innocent children lived and played in the area. The egregiousness of plaintiffs' allegations do not demonstrate the reliability of their experts' opinions concerning causation.

1. Proper Factors and *Kumho*

Plaintiffs contend that the magistrate judge abused his discretion by failing to recognize those factors deserving of weight and those that should not have been relied upon in evaluating the expert testimony. Accusing the trial court of "slavish adherence" to the *Daubert* factors, plaintiffs argue specifically that the lack of publication or other peer review should have been disregarded because it only demonstrates that the "novel" opinions are at the "forefront of toxicology." We disagree.

While one of the last of the factors mentioned in the magistrate's evaluation and not considered dispositive, the lack of peer review and publication was plainly relevant to the determination of whether Kilburn's causation theory was based upon good science. *See Daubert*, 509 U.S. at 594 ("submission to the scrutiny of the scientific community is a component of 'good science,' in part because it increases the likelihood that substantive flaws in methodology will be detected"). Nor is this factor made irrelevant because Kilburn has authored two other studies which were peer reviewed. Although plaintiffs broadly assert that those studies reached similar conclusions related to other PCB exposures, it is clear that they do not demonstrate the reliability of the theory that the plaintiffs' environmental exposure to PCBs can and did cause the impairments and ailments that they claim.[7]

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[7]Kilburn's "Firemen Study," entitled *Neurobehavioral Dysfunction in Firemen Exposed to Polychlorinated Biphenyls (PCBs): Possible Improvement after Detoxification*, was a preliminary report intended to alert others to the possibility of neurobehavioral impairments in fourteen firemen who were acutely

Plaintiffs also seem to argue that the *Kumho* decision, issued after plaintiffs had filed this appeal, represented a liberalizing "retrenchment" from *Daubert* that favored the admission of expert testimony. This characterization is simply not accurate. While *Kumho* clarified that the trial court must determine what factors are pertinent to the reliability determination, it also reiterated the trial court's gatekeeping obligation and extended it to all expert testimony. If anything, *Kumho* supports the magistrate judge's consideration of factors not mentioned by the Supreme Court, including the fact that Kilburn's study was conducted and the experts' opinions were formed for purposes of litigation. *See Daubert v. Merrell Dow Pharm., Inc. (Daubert II)*, 43 F.3d 1311, 1317 (9th Cir. 1995). This factor is consistent with our observation that close judicial analysis of expert testimony is necessary "because expert witnesses are not necessarily always unbiased scientists." *Turpin v. Merrell Dow Pharm.,*

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exposed to heated PCBs, presumably containing the more toxic dibenzofurans (PCDFs), while fighting a transformer fire. Also, Kilburn's "Muscle Shoals Study," entitled *Neurobehavioral Testing of Subjects Exposed Residentially to Groundwater Contaminated From an Aluminum Die-Casting Plant and Local Referents*, involved subjects who were exposed to a number of neurotoxic chemicals, among which PCBs were not a principal contaminant. To the extent that these studies are relied upon to demonstrate that the neurological testing undertaken in the Lobelville study has been the subject of peer review, plaintiffs misunderstand why Kilburn's methodology was found not to be reliable. The magistrate judge did not reject Kilburn's opinions because the use of his battery of tests for neurophysiologic or neuropsychologic impairments were not valid or had not been peer reviewed (although the defendants did challenge them). Rather, it was Kilburn's opinions on causation that were found not to be based upon valid scientific methodology.

Inc., 959 F.2d 1349, 1352 (6th Cir. 1992). Here, the magistrate did not abuse his discretion by considering this factor as he did, or by concluding that "the fact that the study was performed in connection with litigation and funded by plaintiffs' counsel does not militate in Dr. Kilburn's favor."

2. Kilburn's Methodology

In examining the scientific validity of the methodology Kilburn used to conclude that the plaintiffs were injured as a result of exposure to PCBs, the magistrate judge focused most heavily upon Kilburn's failures to account for "confounding factors" that could have caused similar symptoms, establish a temporal relationship between exposure to PCBs in Lobelville and the reported maladies, demonstrate that the plaintiffs received doses of PCBs sufficient to make them ill, or show that his theories enjoyed general acceptance. We agree that the flaws in the methodology underlying Kilburn's opinion that PCB exposure caused the plaintiffs' impairments, as well as a lack of support for the proposition that environmental PCB exposure can cause the impairments Kilburn found in the Lobelville subjects, render his opinion unreliable.

With respect to the question of dose, plaintiffs cannot dispute that Kilburn made no attempt to determine what amount of PCB exposure the Lobelville subjects had received and simply assumed that it was sufficient to make them ill. On appeal, plaintiffs argue only that because PCBs were present in the environment in excess of allowable limits and plaintiffs lived and worked in the area, they must have been exposed at

a level that could cause neurological and lung impairments.[8] This is a significant flaw in Kilburn's methodology as his cohort epidemiological study seeks to demonstrate a relationship between exposure and disease by comparing those who have been exposed with those who have not. Without any factual basis from which a jury could infer that the plaintiffs were in fact exposed to PCBs from Station 79, the reasoning and methodology underlying the testimony is not scientifically valid. *See, e.g., CANDE v. Vesical Chem. Corp.*, 24 F.3d 809 (6th Cir. 1994) (chlordane exposure). This defect goes hand-in-hand with the failure to evaluate or show a temporal relationship between exposure and symptoms, which is most glaringly illustrated by evidence that some of the flagship plaintiffs experienced cognitive impairments and mood disorders before ever moving to Lobelville.

The magistrate judge carefully analyzed the question of whether Kilburn considered and accounted for confounding factors which could be responsible for the impairments and health problems found in the plaintiffs. Without contesting any specific findings, plaintiffs assert that Kilburn's statistical analysis accounted for any significant confounding factors.[9]

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[8]In fact, the record indicates that five of the seven flagship plaintiffs had their blood tested for the presence of PCBs, but none were above the normal range.

[9]Examination of the study itself suggests that statistical adjustments were made only to account for differences in age, education, gender, and height between the Lobelville subjects and the control group.

Plaintiffs explain the statistical analysis as follows. The ninety-eight Lobelville subjects and the fifty-eight unexposed referents completed questionnaires and were subjected to a battery of tests intended to detect neurological and pulmonary abnormalities. The results were given numerical values, and the abnormal scores were compiled. When the total score reached a certain level of significance, Kilburn concluded that those ill effects were, more probably than not, caused by PCB exposure. This kind of cohort epidemiological study hopes to establish an association between exposure and disease, but an association does not mean there is a cause and effect relationship. *See* Reference Manual on Scientific Evid. 333, 348 (2d ed. 2000). Before any inferences are drawn about causation, the possibility of other reasons for the association must be examined, including chance, biases such as selection or informational bias, and confounding causes. *Id.* at 354.

Even if this methodology validly showed that plaintiffs were impaired (which defendants do not concede), it did not provide a valid scientific basis for the opinion on causation. As Kilburn admitted, these tests could not identify what caused the impairments, and there were a number of other possible causes or confounding factors. He testified that alcohol was the most common cause of what he characterized as encephalopathy and cigarette smoking the most common cause of airway obstruction. He also testified that the symptoms could be caused by drug use, living in mobile homes, exposure to chemicals in solvents and spray paints, and working with textiles. As the magistrate judge found, the record is "replete" "with evidence of other factors or agents which, according to Dr. Kilburn's own testimony, may have been responsible for the symptoms suffered by the flagship

plaintiffs - evidence which, it appears, Dr. Kilburn utterly ignored." We agree with the magistrate judge that there was "simply no basis for Dr. Kilburn's assumption that PCBs, and not one of numerous other factors, was the cause of plaintiffs' reported maladies."

Without any citation to the record, plaintiffs claim next that Kilburn actually included the thirty-three members of the Mormon Church from Waverly, Tennessee, in the Tennessee control group in order to account for the confounding factors of alcohol use, drug abuse, and cigarette smoking since such activities are discouraged by the church. There is no indication in the record, however, that Kilburn included this group of referents for this purpose, or that he analyzed the data to account for such factors.

While plaintiffs assert generally that there are commonly observed symptoms of PCB exposure documented in the scientific literature, Kilburn actually admitted that no scientific literature supports his opinion that PCBs can cause the brain disorder he refers to as encephalopathy. Indeed, plaintiffs do not specifically contest any of the findings concerning the lack of general acceptance for Kilburn's theory that PCBs can cause the kind of symptoms identified in the Lobelville plaintiffs. Shifting focus, plaintiffs claim instead that the battery of tests he used are generally accepted as a means of measuring neurological impairment. Even assuming that this were true, that does not demonstrate the scientific validity of the methodology used to conclude that PCBs caused the injuries reflected by the results of those tests.

As the Court in *Daubert* stated, the inquiry must be "solely on principles and methodology, not on the conclusions

that they generate." 509 U.S. at 595. However, as the Court later clarified, "conclusions and methodology are not entirely distinct from one another." *Joiner*, 522 U.S. at 146. A district court is not required to admit expert testimony "that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *Id.* The magistrate judge did not abuse his discretion by finding that Kilburn's testimony presented just such a case.

3. Dr. Hirsch's Testimony

Hirsch, board certified in neurology and psychiatry, examined the seven flagship plaintiffs and testified that their various conditions were more likely than not caused by exposure to PCBs. He concluded that of the seven flagship plaintiffs, all suffered from encephalopathy, four from polyneuropathy, three from cephalgia (headaches), one from hyposmia (reduced ability to smell), two from hypogeusia (reduced ability to taste), one from optic neuropathy, one from autonomic neuropathy, and one from phantosmia (hallucinating a smell). The magistrate found, over defendant's objections, that Hirsch was qualified as an expert, but excluded his testimony because his opinion that these conditions were caused by exposure to PCBs from Station 79 was not based on valid scientific knowledge.

Plaintiffs emphasize that the standardized diagnostic tests used by Hirsch are generally accepted methods for detecting neurological impairments. The acceptance of those tests, however, does not demonstrate the scientific validity and reliability of his opinion that the deficits he observed were caused by exposure to PCBs. It is the methodology by which

he reached his opinion concerning causation that must be found reliable. Hirsch admitted no knowledge concerning the actual exposure of the seven plaintiffs to PCBs or the temporal relationship between their exposure and symptoms. The magistrate judge properly rejected the circular reasoning that the plaintiffs must have been exposed to the PCBs because PCBs were present in the environment and plaintiffs showed symptoms.

In addition, the magistrate found that Hirsch failed to account for confounding factors, or identify scientific literature that supported his theory that the symptoms at issue can be caused by exposure to PCBs. Although plaintiffs repeatedly state that Hirsch referred to a list of 120 scientific articles, they fail to identify any specific literature that supports his conclusion with respect to causation. Our review of the record convinces us that the magistrate judge did not abuse his discretion by finding that Hirsch's testimony was not based upon valid scientific knowledge and would not assist the trier of fact.

AFFIRMED.

APPENDIX B

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TENNESSEE EASTERN DIVISION

[Filed October 14, 1999]

No. 95-1112

JAMES L. NELSON, et al.,
Plaintiffs,

v.

TENNESSEE GAS PIPELINE COMPANY,
Defendants.

ORDER DENYING PLAINTIFFS' MOTION TO AMEND COURT ORDER

Before the court is the motion of plaintiffs, James Nelson, et al. (collectively referred to as "Nelson"), requesting that the court amend, pursuant to Rule 52(b) of the Federal Rules of Civil Procedure, its order granting defendants' motions to exclude testimony of experts entered April 28, 1998, as well as its September 2, 1998 order granting defendants' motion for summary judgment.

This lawsuit was brought by numerous individuals alleging exposure to toxic substances released into the environment by defendant Tennessee Gas Pipeline Company in connection with its operation of a natural gas pipeline compressor station located in Lobelville, Tennessee. Plaintiffs claimed that the release of such substances, which included poly-chlorinated biphenyls ("PCBs"), into the soil, groundwater, and atmosphere in the vicinity of the pumping station, as well as into nearby Marrs Branch Creek, caused them to suffer from various injuries and disorders. Plaintiffs brought this action under the theories of negligence, trespass, common law nuisance, and strict liability.

In their motion to exclude testimony, defendants sought to exclude from trial the opinions of plaintiffs' experts, Kaye Kilburn, M.D. and Alan Hirsch, M.D. In a rather lengthy decision following painstaking review of the parties' submissions and applicable law, the court found that Dr. Kilburn's studies, upon which he based his opinions, suffered from significant methodological flaws and that his opinions were based on conjecture, speculation, and litigation animus. The opinions of Dr. Hirsch, the court found, were not based on scientific knowledge. Thus, as it would not assist the trier of fact and was likely to mislead the jury, the proffered testimony was excluded from trial. In its order granting summary judgment in favor of defendants, the court found that, as a result of the exclusion of their experts' testimony, the scientific evidence presented by plaintiffs was insufficient to allow a jury to conclude by a preponderance of the evidence that they had suffered personal injuries as a result of PCB exposure by defendants.

In the instant motion, plaintiffs argued that the court erred in making its rulings based upon a "misunderstanding as to the extent of the evidence present in this case to support the validity of the plaintiffs' medical expert testimony and case in chief." (Mem. in Supp. of Pls.' Mot. to Amend Court Order Pursuant to Rule 52(b) of FRCP at p. 3.) Plaintiffs further insisted in their reply to defendants' response to the motion that they believed the court "had not realized and considered the large body of scientific publications and methodology that were referred to by the Plaintiffs in their initial briefs and the depositions related to this matter, but not summarized, itemized and discussed in detail in those briefs." (Pl.'s Resp. Brief to Defs.' Mem. in Opposition to Pls.' Mot. to Reconsider at p. 9.) The resulting lack of sufficient information before the court was the cause, according to plaintiffs, of the court's error. Plaintiffs now urge the court to amend its previous decision based upon the information contained in and submitted contemporaneously with this motion to reconsider.

Rule 52(b), Fed. R. Civ. P, permits the court, upon motion filed no later than 10 days after entry of judgment, to amend its findings or make additional findings. See Fed. R. Civ. P. 52(b). Rule 52(b) appears, however, to contemplate that a trial has been conducted, which is not the case here. See St. Paul Mercury Ins. Co. v. Fair Grounds Corp., 123 F.3d 336,339 (5th Cir. 1997) (Rule 52(b) contemplates an underlying trial). Rather, as the Federal Rules do not specifically provide for motions to reconsider, which the

instant motion is in essence,[1] requests such as that at bar are best construed as motions to alter or amend judgment under Fed. R. Civ. P. 59(e). See id.; Moody v. Pepsi-Cola Metro. Bottling Co., Inc., 915 F.2d 201, 206 (6th Cir. 1990); Huff v. Metropolitan Life Ins. Co., 675 F.2d 119, 122 (6th Cir. 1982). Rulings on Rule 59(e) motions are within the sound discretion of the trial court. McMahon v. Libbey-Ownes-Ford Co., 870 F.2d 1073, 1078 (6th Cir. 1989).

Generally, reconsideration of a judgment is an extraordinary remedy and should be used sparingly. Pacific Ins. Co. v. American Nat'l Fire Ins. Co., 148 F.3d 396, 403 (4th Cir. 1998), cert. denied, ___ U.S. ___, 119 S.Ct. 869, 142 L.Ed.2d 771 (1999). Rule 59(e) motions serve a limited purpose and may be granted where there is a clear error of law, newly discovered evidence, an intervening change in existing law, or to prevent manifest injustice. GenCorp, Inc. v. American Int'l Underwriters, 178 F.3d 804, 834 (6th Cir. 1999); Keweenaw Bay Indian Community v. Michigan, 152 F.R.D. 562, 563 (W.D. Mich. 1992), aff'd, 11 F.3d 1341 (6th Cir. 1993). The rule permits a court to correct its own errors, "'sparing the parties and the appellate courts the burden of unnecessary appellate proceedings.'" Pacific Ins. Co., 148 F.3d at 403 (quoting Russell v. Delco Remy Div. of Gen. Motors Corp., 51 F.3d 746, 749 (7th Cir. 1995)). A party is not permitted on a motion to amend, however, to

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[1]Indeed, plaintiffs' reply brief is entitled "Plaintiff's Response Brief to Defendants' Memorandum in Opposition to Plaintiffs' Motion to Reconsider."

"repeat old arguments previously considered and rejected, or to raise new legal theories that should have been raised earlier." National Metal Finishing Co., Inc. v. BarclaysAmerican/Commercial, Inc., 899 F.2d 119, 122-23 (1st Cir. 1990); see also Keweenaw Bay Indian Community, 152 F.R.D. at 563.

In their motion to reconsider, plaintiffs have not alleged a clear error of law, newly discovered evidence, an intervening change in existing law, or that a manifest injustice has occurred. Instead, it is clear upon review that the plaintiffs' submissions constitute merely a rehashing of the arguments previously presented to this court by which plaintiffs seek a second bite at the apple. Although they have submitted voluminous exhibits in connection with the instant motion, which, they claim, would have convinced the court to find in their favor initially, there is no indication and, indeed, no argument by plaintiffs that these materials were not available to them and could not have been presented to the court prior to judgment. Evidence presented in a motion for reconsideration may only be considered "newly discovered evidence" for purposes of Rule 59(e) if it could not, in the exercise of reasonable diligence, have been submitted previously. Javetz v. Board of Control, Grand Valley State Univ., 903 F. Supp. 1181, 1191 (W.D. Mich. 1995); see also GenCorp, Inc., 178 F.3d at 834. Denial of a motion to amend is not an abuse of discretion where the motion is based on evidence a party had in his control at the time of the court's earlier decision. Emmons v. McLaughlin, 874 F.2d 351, 358 (6th Cir. 1989). Accordingly, as the basis for plaintiffs' motion is not an appropriate ground for a motion to reconsider, the motion is DENIED.

IT IS SO ORDERED this 14th day of October, 1999.

/s/_____
J. DANIEL BREEN
UNITED STATES MAGISTRATE JUDGE